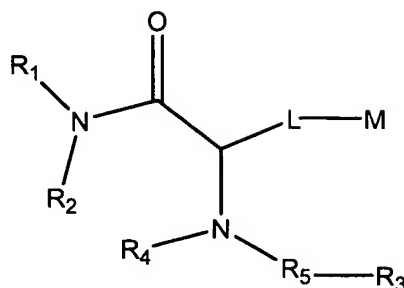


What is claimed is:

1. A compound comprising the formula:



wherein

R<sub>1</sub> comprises a moiety attached to the nitrogen selected from the group consisting of a substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl and C<sub>2-12</sub> aminoalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained C<sub>1-12</sub> alkyls, C<sub>2-12</sub> oxaalkyls or C<sub>2-12</sub> aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings;

R<sub>2</sub> comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

R<sub>3</sub> and R<sub>4</sub> are each independently selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that R<sub>3</sub> and R<sub>4</sub> are not both hydrogen;

R<sub>5</sub> is selected from the group consisting of a carbonyl, a substituted or unsubstituted C<sub>1-3</sub> alkyl, a substituted or unsubstituted -C<sub>1-3</sub> alkyl-C(O), a substituted or unsubstituted -C(O)-C<sub>1-3</sub> alkyl, and a substituted or unsubstituted -C(O)C(O)C<sub>1-3</sub> alkyl;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

2. A compound according to claim 1 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted straight chained C<sub>1-6</sub> alkyl, C<sub>2-6</sub> oxaalkyl or C<sub>2-6</sub> aminoalkyl.
3. A compound according to claim 1 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted straight chained C<sub>1-4</sub> alkyl, C<sub>2-4</sub> oxaalkyl or C<sub>2-4</sub> aminoalkyl.
4. A compound according to claim 1 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is 1, 2, 3, 4, 5, or 6, atoms in length.
5. A compound according to claim 1 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> renders the alkyl, oxaalkyl or aminoalkyl a branched alkyl, oxaalkyl or aminoalkyl.
6. A compound according to claim 1 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted five or six membered ring.
7. A compound according to claim 1 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aromatic ring.
8. A compound according to claim 1 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aromatic ring comprising one or more heteroatoms.
9. A compound according to claim 1 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aryl.

10. A compound according to claim 1 wherein  $R_2$  comprise a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

11. A compound according to claim 1 wherein  $R_2$  comprise a moiety selected from the group consisting of a  $C_{1-4}$  alkyl,  $C_{2-4}$  aminoalkyl or  $C_{2-4}$  oxaalkyl,  $-C(O)H$ , and  $-C(O)-C_{1-3}$  alkyl.

12. A compound according to claim 1 wherein  $R_3$  or  $R_4$  comprise a moiety selected from the group consisting of a substituted or unsubstituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl or  $C_{2-12}$  oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, when the other of  $R_3$  and  $R_4$  is a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

13. A compound according to claim 1 wherein  $R_3$  or  $R_4$  comprises a moiety selected from the group consisting of a substituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl and  $C_{2-12}$  oxaalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained  $C_{1-12}$  alkyls,  $C_{2-12}$  oxaalkyls or  $C_{2-12}$  aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings and the other comprises a member of the group consisting of  $C_{1-4}$  alkyl,  $C_{2-4}$  aminoalkyl or  $C_{2-4}$  oxaalkyl,  $-C(O)H$ , and  $-C(O)-C_{1-3}$  alkyl.

14. A compound according to claim 1 wherein  $R_3$  comprises a substituted 6 membered ring that is substituted beta relative to  $R_5$ .

15. A compound according to claim 1 wherein  $R_3$  comprises a substituted aryl that is substituted meta relative to  $R_5$ .

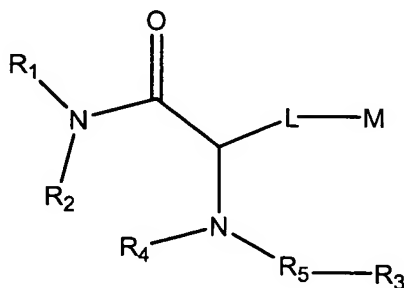
16. A compound according to claim 1 wherein  $R_3$  comprises a substituted aryl that is substituted meta relative to  $R_5$  with a substituent selected from the group consisting of a  $C_{1-4}$  alkyl,  $C_{2-4}$  aminoalkyl or  $C_{2-4}$  oxaalkyl,  $-C(O)H$ ,  $-C(O)-C_{1-3}$  alkyl.

17. A compound according to claim 1 wherein L comprises a cinnamate moiety.

18. A compound according to claim 1 wherein M comprises a member selected from the group consisting of trifluoroacetyl ( $-C(O)-CF_3$ ),  $-NH-P(O)OH-CH_3$ , sulfonamides ( $-SO_2NH_2$ ), thiols( $-SH$ ), and carbonyl groups having the formula  $-C(O)-R_7$  wherein  $R_7$  is hydroxylamino, hydroxyl, amino, alkylamino, or an alkyloxy group.

19. A compound according to claim 1 wherein M comprises a hydroxamic acid moiety.

20. A compound comprising the formula:



wherein

$R_1$  and  $R_2$  each independently comprise a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl or  $C_{2-12}$  oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that  $R_1$  and  $R_2$  are not both hydrogen;

one of  $R_3$  and  $R_4$  is selected from the group consisting of a substituted or unsubstituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl or  $C_{2-12}$  oxaalkyl, and a substituted or unsubstituted

3, 4, 5, 6, 7 or 8 membered ring, when the other of  $R_3$  and  $R_4$  is a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

$R_5$  is selected from the group consisting of a carbonyl, a substituted or unsubstituted  $C_{1-3}$  alkyl, a substituted or unsubstituted  $-C_{1-3}$  alkyl-C(O), a substituted or unsubstituted  $-C(O)-C_{1-3}$  alkyl, and a substituted or unsubstituted  $-C(O)C(O)C_{1-3}$  alkyl;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

21. A compound according to claim 20 wherein  $R_3$  or  $R_4$  is selected from the group consisting of a substituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl and  $C_{2-12}$  oxaalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained  $C_{1-12}$  alkyls,  $C_{2-12}$  oxaalkyls or  $C_{2-12}$  aminoalkyls and substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered rings and the other is selected from the group consisting of  $C_{1-4}$  alkyl,  $C_{2-4}$  aminoalkyl or  $C_{2-4}$  oxaalkyl,  $-C(O)H$ ,  $-C(O)-C_{1-3}$  alkyl.

22. A compound according to claim 20 wherein  $R_1$  comprises a moiety attached to the nitrogen selected from the group consisting of a substituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  oxaalkyl and  $C_{2-12}$  aminoalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained  $C_{1-12}$  alkyls,  $C_{2-12}$  oxaalkyls or  $C_{2-12}$  aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings.

23. A compound according to claim 22 wherein the substituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  oxaalkyl or  $C_{2-12}$  aminoalkyl of  $R_1$  is a substituted straight chained  $C_{1-6}$  alkyl,  $C_{2-6}$  oxaalkyl or  $C_{2-6}$  aminoalkyl.

24. A compound according to claim 22 wherein the substituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  oxaalkyl or  $C_{2-12}$  aminoalkyl of  $R_1$  is a substituted straight chained  $C_{1-4}$  alkyl,  $C_{2-4}$  oxaalkyl or  $C_{2-4}$  aminoalkyl.

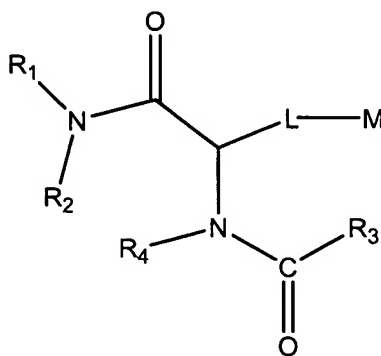
25. A compound according to claim 22 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is 1, 2, 3, 4, 5, or 6, atoms in length.
26. A compound according to claim 22 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> renders the alkyl, oxaalkyl or aminoalkyl a branched alkyl, oxaalkyl or aminoalkyl.
27. A compound according to claim 22 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted five or six membered ring.
28. A compound according to claim 22 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aromatic ring.
29. A compound according to claim 22 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aromatic ring comprising one or more heteroatoms.
30. A compound according to claim 22 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aryl.
31. A compound according to claim 22 wherein R<sub>2</sub> comprise a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

32. A compound according to claim 22 wherein R<sub>2</sub> comprise a moiety selected from the group consisting of a C<sub>1-4</sub> alkyl, C<sub>2-4</sub> aminoalkyl or C<sub>2-4</sub> oxaalkyl, -C(O)H, and -C(O)-C<sub>1-3</sub> alkyl.
33. A compound according to claim 20 wherein the other of R<sub>3</sub> and R<sub>4</sub> is a moiety that has a maximum chain length of non-hydrogen atoms of four or less.
34. A compound according to claim 20 wherein R<sub>3</sub> or R<sub>4</sub> comprises a moiety selected from the group consisting of a substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl and C<sub>2-12</sub> oxaalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained C<sub>1-12</sub> alkyls, C<sub>2-12</sub> oxaalkyls or C<sub>2-12</sub> aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings and the other comprises a member of the group consisting of C<sub>1-4</sub> alkyl, C<sub>2-4</sub> aminoalkyl or C<sub>2-4</sub> oxaalkyl, -C(O)H, and -C(O)-C<sub>1-3</sub> alkyl.
35. A compound according to claim 20 wherein R<sub>3</sub> comprises a substituted 6 membered ring that is substituted beta relative to R<sub>5</sub>.
36. A compound according to claim 20 wherein R<sub>3</sub> comprises a substituted aryl that is substituted meta relative to R<sub>5</sub>.
37. A compound according to claim 20 wherein R<sub>3</sub> comprises a substituted aryl that is substituted meta relative to R<sub>5</sub> with a substituent selected from the group consisting of a C<sub>1-4</sub> alkyl, C<sub>2-4</sub> aminoalkyl or C<sub>2-4</sub> oxaalkyl, -C(O)H, -C(O)-C<sub>1-3</sub> alkyl.
38. A compound according to claim 20 wherein L comprises a cinnamate moiety.
39. A compound according to claim 20 wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>),

thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>7</sub> wherein R<sub>7</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkyloxy group.

40. A compound according to claim 20 wherein M comprises a hydroxamic acid moiety.

41. A compound comprising the formula



wherein

R<sub>1</sub> and R<sub>2</sub> each independently comprise a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that R<sub>1</sub> and R<sub>2</sub> are not both hydrogen;

R<sub>3</sub> and R<sub>4</sub> are each independently selected from the group consisting of a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

42. A compound according to claim 41 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted straight chained C<sub>1-6</sub> alkyl, C<sub>2-6</sub> oxaalkyl or C<sub>2-6</sub> aminoalkyl.



43. A compound according to claim 41 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted straight chained C<sub>1-4</sub> alkyl, C<sub>2-4</sub> oxaalkyl or C<sub>2-4</sub> aminoalkyl.

44. A compound according to claim 41 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is 1, 2, 3, 4, 5, or 6, atoms in length.

45. A compound according to claim 41 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> renders the alkyl, oxaalkyl or aminoalkyl a branched alkyl, oxaalkyl or aminoalkyl.

46. A compound according to claim 41 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted five or six membered ring.

47. A compound according to claim 41 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aromatic ring.

48. A compound according to claim 41 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aromatic ring comprising one or more heteroatoms.

49. A compound according to claim 41 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aryl.

50. A compound according to claim 41 wherein R<sub>2</sub> comprise a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

51. A compound according to claim 41 wherein  $R_2$  comprise a moiety selected from the group consisting of a  $C_{1-4}$  alkyl, aminoalkyl or oxaalkyl,  $-C(O)H$ , and  $-C(O)-C_{1-3}$  alkyl.

52. A compound according to claim 41 wherein  $R_3$  or  $R_4$  comprise a moiety selected from the group consisting of a substituted or unsubstituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl or  $C_{2-12}$  oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, when the other of  $R_3$  and  $R_4$  is a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

53. A compound according to claim 41 wherein  $R_3$  or  $R_4$  comprises a moiety selected from the group consisting of a substituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl and  $C_{2-12}$  oxaalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained  $C_{1-12}$  alkyls,  $C_{2-12}$  oxaalkyls or  $C_{2-12}$  aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings and the other comprises a member of the group consisting of  $C_{1-4}$  alkyl,  $C_{2-4}$  aminoalkyl or  $C_{2-4}$  oxaalkyl,  $-C(O)H$ , and  $-C(O)-C_{1-3}$  alkyl.

54. A compound according to claim 41 wherein  $R_3$  comprises a substituted 6 membered ring that is substituted beta relative to  $R_5$ .

55. A compound according to claim 41 wherein  $R_3$  comprises a substituted aryl that is substituted meta relative to  $R_5$ .

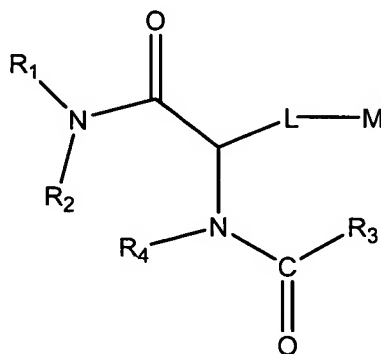
56. A compound according to claim 41 wherein  $R_3$  comprises a substituted aryl that is substituted meta relative to  $R_5$  with a substituent selected from the group consisting of a  $C_{1-4}$  alkyl,  $C_{2-4}$  aminoalkyl or  $C_{2-4}$  oxaalkyl,  $-C(O)H$ ,  $-C(O)-C_{1-3}$  alkyl.

57. A compound according to claim 41 wherein  $L$  comprises a cinnamate moiety.

58. A compound according to claim 41 wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>7</sub> wherein R<sub>7</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkyloxy group.

59. A compound according to claim 41 wherein M comprises a hydroxamic acid moiety.

60. A compound comprising the formula



wherein

R<sub>1</sub> comprises a moiety attached to the nitrogen selected from the group consisting of a substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl and C<sub>2-12</sub> aminoalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained C<sub>1-12</sub> alkyls, C<sub>2-12</sub> oxaalkyls or C<sub>2-12</sub> aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings;

R<sub>2</sub> comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

R<sub>3</sub> and R<sub>4</sub> are each independently selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that R<sub>3</sub> and R<sub>4</sub> are not both hydrogen;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

61. A compound according to claim 60 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted straight chained C<sub>1-6</sub> alkyl, C<sub>2-6</sub> oxaalkyl or C<sub>2-6</sub> aminoalkyl.

62. A compound according to claim 60 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted straight chained C<sub>1-4</sub> alkyl, C<sub>2-4</sub> oxaalkyl or C<sub>2-4</sub> aminoalkyl.

63. A compound according to claim 60 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is 1, 2, 3, 4, 5, or 6, atoms in length.

64. A compound according to claim 60 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> renders the alkyl, oxaalkyl or aminoalkyl a branched alkyl, oxaalkyl or aminoalkyl.

65. A compound according to claim 60 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted five or six membered ring.

66. A compound according to claim 60 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aromatic ring.

67. A compound according to claim 60 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aromatic ring comprising one or more heteroatoms.

68. A compound according to claim 60 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aryl.

69. A compound according to claim 60 wherein R<sub>2</sub> comprise a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

70. A compound according to claim 60 wherein R<sub>2</sub> comprise a moiety selected from the group consisting of a C<sub>1-4</sub> alkyl, C<sub>2-4</sub> aminoalkyl or C<sub>2-4</sub> oxaalkyl, -C(O)H, and -C(O)-C<sub>1-3</sub> alkyl.

71. A compound according to claim 60 wherein R<sub>3</sub> or R<sub>4</sub> comprise a moiety selected from the group consisting of a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, when the other of R<sub>3</sub> and R<sub>4</sub> is a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

72. A compound according to claim 60 wherein R<sub>3</sub> or R<sub>4</sub> comprises a moiety selected from the group consisting of a substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl and C<sub>2-12</sub> oxaalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained C<sub>1-12</sub> alkyls, C<sub>2-12</sub> oxaalkyls or C<sub>2-12</sub> aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings and the other comprises a member of the group consisting of C<sub>1-4</sub> alkyl, C<sub>2-4</sub> aminoalkyl or C<sub>2-4</sub> oxaalkyl, -C(O)H, and -C(O)-C<sub>1-3</sub> alkyl.

73. A compound according to claim 60 wherein R<sub>3</sub> comprises a substituted 6 membered ring that is substituted beta relative to R<sub>5</sub>.

74. A compound according to claim 60 wherein  $R_3$  comprises a substituted aryl that is substituted meta relative to  $R_5$ .

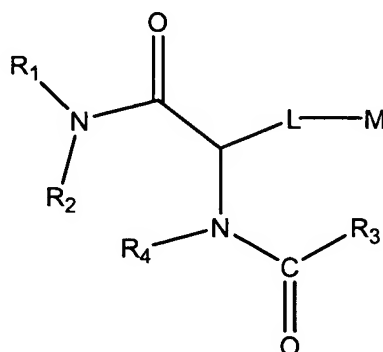
75. A compound according to claim 60 wherein  $R_3$  comprises a substituted aryl that is substituted meta relative to  $R_5$  with a substituent selected from the group consisting of a  $C_{1-4}$  alkyl,  $C_{2-4}$  aminoalkyl or  $C_{2-4}$  oxaalkyl,  $-C(O)H$ ,  $-C(O)-C_{1-3}$  alkyl.

76. A compound according to claim 60 wherein L comprises a cinnamate moiety.

77. A compound according to claim 60 wherein M comprises a member selected from the group consisting of trifluoroacetyl ( $-C(O)-CF_3$ ),  $-NH-P(O)OH-CH_3$ , sulfonamides ( $-SO_2NH_2$ ), thiols ( $-SH$ ), and carbonyl groups having the formula  $-C(O)-R_7$  wherein  $R_7$  is hydroxylamino, hydroxyl, amino, alkylamino, or an alkyloxy group.

78. A compound according to claim 60 wherein M comprises a hydroxamic acid moiety.

79. A compound comprising the formula



wherein

$R_1$  and  $R_2$  each independently comprise a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl or  $C_{2-12}$  oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that  $R_1$  and  $R_2$  are not both hydrogen;

one of R<sub>3</sub> and R<sub>4</sub> is selected from the group consisting of a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, when the other of R<sub>3</sub> and R<sub>4</sub> is a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

80. A compound according to claim 79 wherein R<sub>3</sub> or R<sub>4</sub> is selected from the group consisting of a substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl and C<sub>2-12</sub> oxaalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained C<sub>1-12</sub> alkyls, C<sub>2-12</sub> oxaalkyls or C<sub>2-12</sub> aminoalkyls and substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered rings and the other is selected from the group consisting of C<sub>1-4</sub> alkyl, C<sub>2-4</sub> aminoalkyl or C<sub>2-4</sub> oxaalkyl, -C(O)H, -C(O)-C<sub>1-3</sub> alkyl.

81. A compound according to claim 79 wherein R<sub>1</sub> comprises a moiety attached to the nitrogen selected from the group consisting of a substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl and C<sub>2-12</sub> aminoalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained C<sub>1-12</sub> alkyls, C<sub>2-12</sub> oxaalkyls or C<sub>2-12</sub> aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings.

82. A compound according to claim 79 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted straight chained C<sub>1-6</sub> alkyl, C<sub>2-6</sub> oxaalkyl or C<sub>2-6</sub> aminoalkyl.

83. A compound according to claim 79 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted straight chained C<sub>1-4</sub> alkyl, C<sub>2-4</sub> oxaalkyl or C<sub>2-4</sub> aminoalkyl.

84. A compound according to claim 79 wherein the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is 1, 2, 3, 4, 5, or 6, atoms in length.

85. A compound according to claim 79 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> renders the alkyl, oxaalkyl or aminoalkyl a branched alkyl, oxaalkyl or aminoalkyl.

86. A compound according to claim 79 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted five or six membered ring.

87. A compound according to claim 79 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aromatic ring.

88. A compound according to claim 79 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aromatic ring comprising one or more heteroatoms.

89. A compound according to claim 79 wherein the substituent attached to the substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl or C<sub>2-12</sub> aminoalkyl of R<sub>1</sub> is a substituted or unsubstituted aryl.

90. A compound according to claim 79 wherein R<sub>2</sub> comprise a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

91. A compound according to claim 79 wherein R<sub>2</sub> comprise a moiety selected from the group consisting of a C<sub>1-4</sub> alkyl, C<sub>2-4</sub> aminoalkyl or C<sub>2-4</sub> oxaalkyl, -C(O)H, and -C(O)-C<sub>1-3</sub> alkyl.



92. A compound according to claim 79 wherein the other of R<sub>3</sub> and R<sub>4</sub> is a moiety that has a maximum chain length of non-hydrogen atoms of four or less.

93. A compound according to claim 79 wherein R<sub>3</sub> or R<sub>4</sub> comprises a moiety selected from the group consisting of a substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl and C<sub>2-12</sub> oxaalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained C<sub>1-12</sub> alkyls, C<sub>2-12</sub> oxaalkyls or C<sub>2-12</sub> aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings and the other comprises a member of the group consisting of C<sub>1-4</sub> alkyl, C<sub>2-4</sub> aminoalkyl or C<sub>2-4</sub> oxaalkyl, -C(O)H, and -C(O)-C<sub>1-3</sub> alkyl.

94. A compound according to claim 79 wherein R<sub>3</sub> comprises a substituted 6 membered ring that is substituted beta relative to R<sub>5</sub>.

95. A compound according to claim 79 wherein R<sub>3</sub> comprises a substituted aryl that is substituted meta relative to R<sub>5</sub>.

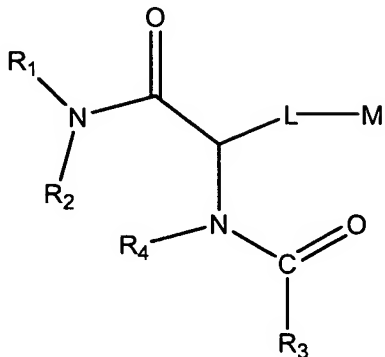
96. A compound according to claim 79 wherein R<sub>3</sub> comprises a substituted aryl that is substituted meta relative to R<sub>5</sub> with a substituent selected from the group consisting of a C<sub>1-4</sub> alkyl, C<sub>2-4</sub> aminoalkyl or C<sub>2-4</sub> oxaalkyl, -C(O)H, -C(O)-C<sub>1-3</sub> alkyl.

97. A compound according to claim 79 wherein L comprises a cinnamate moiety.

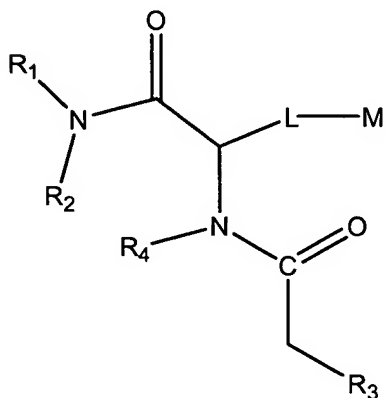
98. A compound according to claim 79 wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>7</sub> wherein R<sub>7</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkyloxy group.

99. A compound according to claim 79 wherein M comprises a hydroxamic acid moiety.

100. A compound comprising the formula



or



wherein

R<sub>1</sub> and R<sub>2</sub> each independently comprise a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that R<sub>1</sub> and R<sub>2</sub> are not both hydrogen;

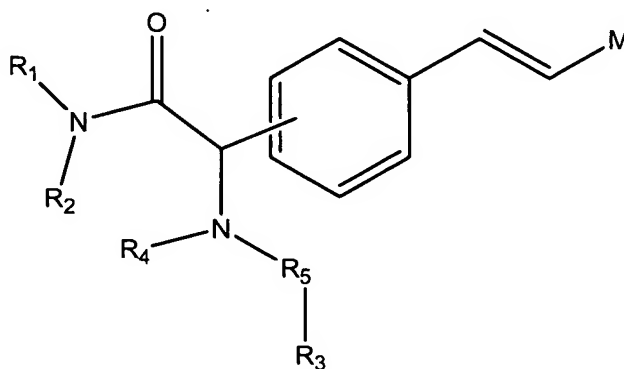
R<sub>3</sub> comprises a substituted six membered ring attached to the carbonyl carbon or methylene wherein at least one of the substituents of the six membered ring is beta relative to atom attached to the carbonyl carbon or methylene;

R<sub>4</sub> comprises a moiety selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

101. A compound comprising the formula:



wherein

R<sub>1</sub> comprises a moiety attached to the nitrogen selected from the group consisting of a substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl and C<sub>2-12</sub> aminoalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained C<sub>1-12</sub> alkyls, C<sub>2-12</sub> oxaalkyls or C<sub>2-12</sub> aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings;

R<sub>2</sub> comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

R<sub>3</sub> and R<sub>4</sub> are each independently selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a

substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that  $R_3$  and  $R_4$  are not both hydrogen;

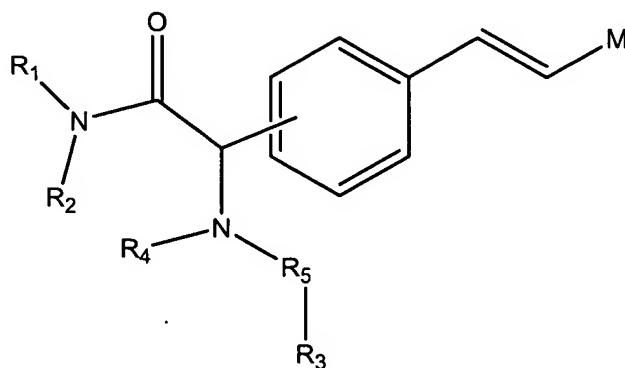
$R_5$  is selected from the group consisting of a carbonyl, a substituted or unsubstituted  $C_{1-3}$  alkyl, a substituted or unsubstituted  $-C_{1-3}$  alkyl-C(O), a substituted or unsubstituted  $-C(O)-C_{1-3}$  alkyl, and a substituted or unsubstituted  $-C(O)C(O)C_{1-3}$  alkyl; and

M is a substituent capable of complexing with a protein metal ion.

102. A compound according to claim 101 wherein the phenyl ring is meta substituted.

103. A compound according to claim 101 wherein the phenyl ring is para substituted.

104. A compound comprising the formula:



wherein

$R_1$  and  $R_2$  each independently comprise a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl or  $C_{2-12}$  oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that  $R_1$  and  $R_2$  are not both hydrogen;

one of  $R_3$  and  $R_4$  is selected from the group consisting of a substituted or unsubstituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl or  $C_{2-12}$  oxaalkyl, and a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, when the other of  $R_3$  and  $R_4$  is a moiety selected from the group

consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

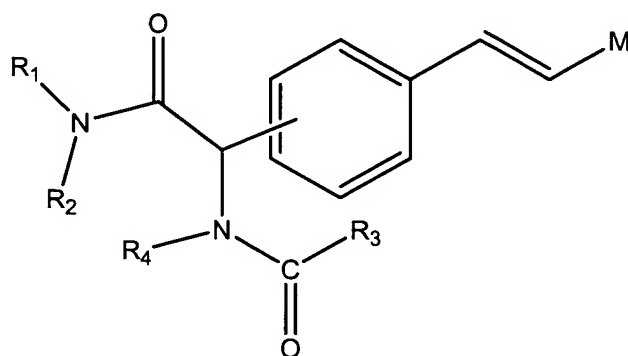
R<sub>5</sub> is selected from the group consisting of a carbonyl, a substituted or unsubstituted C<sub>1-3</sub> alkyl, a substituted or unsubstituted -C<sub>1-3</sub> alkyl-C(O), a substituted or unsubstituted -C(O)-C<sub>1-3</sub> alkyl, and a substituted or unsubstituted -C(O)C(O)C<sub>1-3</sub> alkyl; and

M is a substituent capable of complexing with a protein metal ion.

105. A compound according to claim 104 wherein the phenyl ring is meta substituted.

106. A compound according to claim 104 wherein the phenyl ring is para substituted.

107. A compound comprising the formula



wherein

R<sub>1</sub> and R<sub>2</sub> each independently comprise a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that R<sub>1</sub> and R<sub>2</sub> are not both hydrogen;

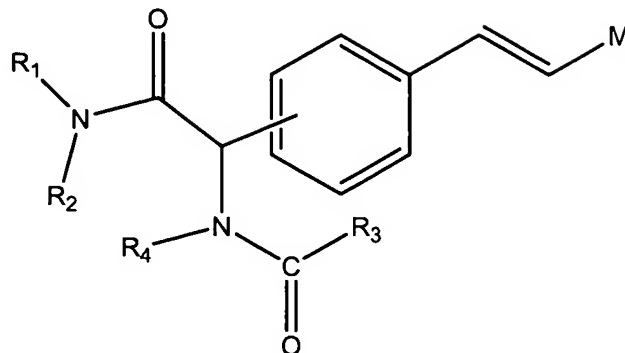
R<sub>3</sub> and R<sub>4</sub> are each independently selected from the group consisting of a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring; and

M is a substituent capable of complexing with a protein metal ion.

108. A compound according to claim 107 wherein the phenyl ring is meta substituted.

109. A compound according to claim 107 wherein the phenyl ring is para substituted.

110. A compound comprising the formula



wherein

R<sub>1</sub> comprises a moiety attached to the nitrogen selected from the group consisting of a substituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> oxaalkyl and C<sub>2-12</sub> aminoalkyl where at least one of the substituents is selected from the group consisting of substituted and unsubstituted straight chained C<sub>1-12</sub> alkyls, C<sub>2-12</sub> oxaalkyls or C<sub>2-12</sub> aminoalkyls and substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered rings;

R<sub>2</sub> comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

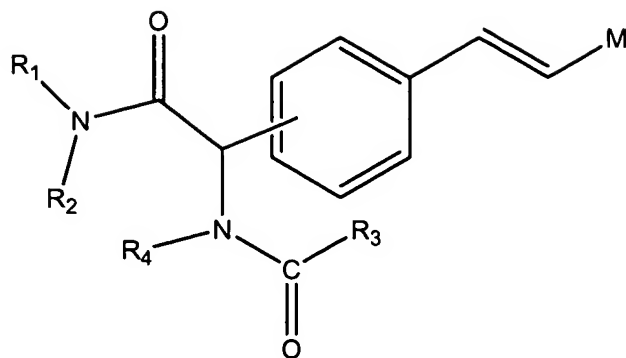
R<sub>3</sub> and R<sub>4</sub> are each independently selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that R<sub>3</sub> and R<sub>4</sub> are not both hydrogen; and

M is a substituent capable of complexing with a protein metal ion.

111. A compound according to claim 110 wherein the phenyl ring is meta substituted.

112. A compound according to claim 110 wherein the phenyl ring is para substituted.

113. A compound comprising the formula



wherein

$R_1$  and  $R_2$  each independently comprise a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl or  $C_{2-12}$  oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that  $R_1$  and  $R_2$  are not both hydrogen;

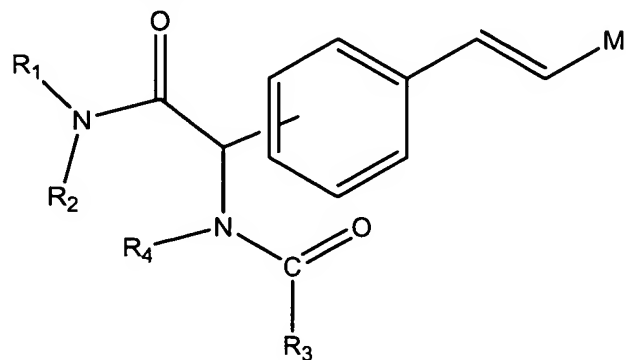
one of  $R_3$  and  $R_4$  is selected from the group consisting of a substituted or unsubstituted straight chained  $C_{1-12}$  alkyl,  $C_{2-12}$  aminoalkyl or  $C_{2-12}$  oxaalkyl, and a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, when the other of  $R_3$  and  $R_4$  is a moiety selected from the group consisting of hydrogen and a moiety that has a maximum chain length of non-hydrogen atoms of six or less.

M is a substituent capable of complexing with a protein metal ion.

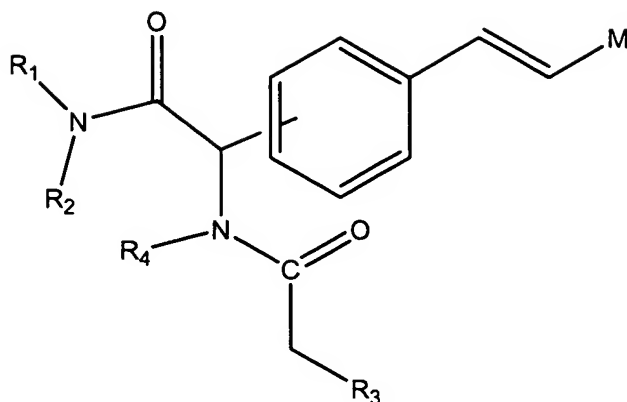
114. A compound according to claim 113 wherein the phenyl ring is meta substituted.

115. A compound according to claim 113 wherein the phenyl ring is para substituted.

116. A compound comprising the formula



or



wherein

R<sub>1</sub> and R<sub>2</sub> each independently comprise a moiety attached to the nitrogen selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring, with the proviso that R<sub>1</sub> and R<sub>2</sub> are not both hydrogen;

R<sub>3</sub> comprises a substituted six membered ring attached to the carbonyl carbon or methylene wherein at least one of the substituents of the six membered ring is beta relative to atom attached to the carbonyl carbon or methylene;

R<sub>4</sub> comprises a moiety selected from the group consisting of hydrogen, a substituted or unsubstituted straight chained C<sub>1-12</sub> alkyl, C<sub>2-12</sub> aminoalkyl or C<sub>2-12</sub> oxaalkyl, and a substituted and unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

M is a substituent capable of complexing with a protein metal ion.

117. A compound according to claim 116 wherein the phenyl ring is meta substituted.

118. A compound according to claim 116 wherein the phenyl ring is para substituted.